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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,313	06/30/2005	Wolfgang Haase	05064	8062
23338	7590	06/14/2006	EXAMINER	
DENNISON, SCHULTZ, DOUGHERTY & MACDONALD 1727 KING STREET SUITE 105 ALEXANDRIA, VA 22314			MILLER, ROSE MARY	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 06/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/541,313

Applicant(s)

HAASE ET AL.

Examiner

Rose M. Miller

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2005 and 03 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/30/05, 10/3/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The citation of US Patent 5,335,547 on the IDS statement filed 03 October 2005 has been crossed off as the reference was previously cited on the IDS statement of 30 June 2005.

Specification

2. The abstract of the disclosure is objected to because legal phraseology such as the word "means" is not allowed in the Abstract. Correction is required. See MPEP § 608.01(b).
3. The disclosure is objected to because of the following informalities: The specification is replete with acronyms that are not defined in the specification. Specific reference is made to the "NC control" of an "NCS". It appears these are known acronyms in the country of origin for this application but which are not known in the US. These acronyms should be replaced with their definitions or at least defined upon the first occurrence of the acronym so that the rest of the specification is easier to understand.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-5 are rejected as being indefinite. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. There is so much intermixing of the apparatus used and the operation of the apparatus that one of ordinary skill in the art cannot determine what the actual steps of the claimed method are, making the determination of the scope of the claim impossible. The claims should be carefully

Art Unit: 2856

revised into current US practice and should put forth positive method steps that can be determined by one of ordinary skill in the art and can define that which Applicant wishes to claim.

Claim 6 is rejected as being indefinite. The claim is generally narrative and indefinite, failing to conform with current U.S. practice. It appears to be a literal translation into English from a foreign document. There is so much intermixing of the apparatus being claimed and the operation of the apparatus that one of ordinary skill in the art cannot determine what the actual elements of the claimed apparatus are, making the determination of the scope of the claim impossible. The claim should be carefully revised into current US practice and should put forth positive apparatus elements that can be determined by one of ordinary skill in the art and can define that which Applicant wishes to claim.

Allowable Subject Matter

6. Claims 1-6 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

7. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach and/or suggest a method of or apparatus for testing a structural component having a complex surface contour comprising, in combination with the other recited steps and elements, manipulating the ultrasonic scanner utilizing multiple axial drives and operating the ultrasonic scanner such that the ultrasonic probe is displaced in accordance with a predetermined surface line and a trigger drive is notionally guided by the surface line and equidistant trigger pulses are generated relative to the surface line.

The closest prior art is that of **Marti et al. (US 6,220,099 B1)** and **Mueller (US 2003/0192382 A1)** which both describe ultrasonic manipulators designed for scanning an ultrasonic scanner over a complex or irregular surface contour. However, **Marti et al.** utilizes a zero positioning sensor to determine the boundaries of the area to be scanned (as set by operator or a previous scan) and the operator selects the maximum step increase for the scanner. The computer then calculates the best "grid" upon which to perform the examination of the designated area and operates the scanner to test at each point on the "grid". **Mueller** teaches utilizing a CAD design of a system to determine the contour of the object under test.

Art Unit: 2856

This is combined with an automatic recognition of a specific test point on the object within the zone of testing. The computer then utilizes the details found in the CAD design to determine how the scan should be conducted. Neither teaches establishing a line along the surface contour and utilizing a trigger drive such that equidistant trigger pulses are generated based upon the contour of the surface line instead of based upon the distance traveled by the ultrasonic probe on the manipulator.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Brown (US 3,555,888) discloses an ultrasonic detection apparatus designed for manipulating over complex surfaces.

Connelly (US 3,898,838) discloses an ultrasonic scanning system with an automatic orientation of the ultrasonic probe based upon the amplitude of the signal reflected from the surface of the object under test.

Marti et al. (WO 99/41600) and **Marti et al. (US 6,220,099 B1)** disclose apparatuses and methods for manipulating an ultrasonic probe over a contoured surface.

Mueller (US 2003/0192382 A1) discloses an acoustic scanning system with a manipulator designed for testing the complex surface of an airplane.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rose M. Miller whose telephone number is 571-272-2199. The examiner can normally be reached on Monday - Friday, 7:30 am to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2856

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



RMM

11 June 2006



HEZRON WILLIAMS
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